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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,978	09/24/2001	Tetsu Yamamoto	1998/F-151	1269
23416	7590	11/16/2004	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP			WILLS, MONIQUE M	
P O BOX 2207			ART UNIT	
WILMINGTON, DE 19899			PAPER NUMBER	
			1746	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/868,978

Applicant(s)

YAMAMOTO

Examiner

Monique M Wills

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

*Response to Amendment*

This Office Action is responsive to the Amendment filed September 8, 2004.

The rejection of claims 1,2 & 8-20 under 35 U.S.C. § 102 (b) as being anticipated by Sansone et al. WO 98/14505 is maintained. Newly added claims 21-23 are also rejected under 35 U.S.C. § 102 (b) as being anticipated by Sansone et al. WO 98/14505.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 & 8-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sansone et al. WO 98/14505.

Sansone teaches a method of producing a polymeric membrane (abstract). With respect to claim 1, Sansone teaches immersing a basic polymer (page 5, lines 5-10) in strong acid at a temperature of 80° for 1 hour (page 8, lines 14-25). The limitation in claim 1, with respect to the strong acid having a concentration sufficient to impregnate the basic polymer with six or more strong acid molecules per polymer repeating unit of the basic polymer, is considered to be an inherent property of the strong acid as set forth in the prior art, because Sansone employs the same phosphoric and sulfuric acid solvents set forth by Applicant.

With respect to claim 2, the immersion time is between about 1 to 60 minutes (page 8, lines 24-26). In re claims 8, 9 & 21-23, the strong acid is phosphoric acid (page 7, lines 15-20). As to claims 10, 11 & 21, the strong acid is sulfuric acid (page 7, lines 15-20). Concerning claims 12, 13 & 22-23, the acid solution generally contains an acid concentration of 5 to 100% (page 7, lines 15-20). With respect to claims 14 & 15, the selected polymers include, polybenzimidazoles (PBI), poly (pyrimidines), polyimidazoles, polybenzthiazoles, polybenzoxazoles, polyoxadiazoles, polyquinoxalines, polythiadiazoles and poly (tetrazapyrenes). See page 5, lines 1-13. In re claims 16-19 & 21, the immersion temperature can be up to 80°C and the immersion time is about 1 to 60 minutes (page 8, lines 20-26).

With respect to claim 20, the membrane is for use as an electrolyte in fuel cells (page 3, lines 25-30). The limitation in claim 20, with respect to the fuel cell comprising a pair of electrodes sandwiching the polyelectrolyte membrane, is considered to be an inherent structure of the fuel cell as set forth in the prior art, because Sansone teaches employing the polymer electrolyte membrane in fuel cells. Polymer electrolyte fuel cells, by definition, have electrodes circumscribing a polymer membrane imbibed with electrolyte solution. The membrane functions as both a separator and an ion conductor between the electrodes.

Therefore, the instant claims are anticipated by the prior art set forth.

### *Response to Arguments*

Applicant contends that the subject invention is patentably distinct from Sansone, because Applicant's claimed process does not relate to porous membranes. Specifically, Sansone teaches a porous membrane, whereas applicant's polymer film forms a uniformly non-porous surface. This argument is not persuasive. The porosity, or lack thereof,

is not necessitated by the claims. It is the claims that define the claimed invention, and it is the claims, not the specifications that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Incl.*, 7 USPQ 2d 1064. In this instance, the method steps remain anticipated by *Sansone*, because the instant claims do not preclude porous membranes.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.


If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

11/10/04



**MICHAEL BARR**  
SUPERVISORY PATENT EXAMINER